

**What is claimed is:**

1.           A method of manufacturing a silicon wafer comprising  
the step of flattening fine roughness existing on a side face of a  
5   silicon block or a silicon stack used for manufacturing the  
silicon wafer.
  
2.           A method according to claim 1, wherein the step of  
flattening comprises spraying a mixture of abrasive grains and a  
10   medium on the side face of the silicon block or the silicon stack,  
shifting closer or contacting a polishing member to or with the  
side face to be polished, and moving the silicon block or the  
silicon stack relatively to the polishing member in the presence  
of the abrasive grains so that the side face of the silicon block or  
15   the silicon stack is mechanically and physically polished.
  
3.           A method according to claim 1, wherein the step of  
flattening comprises spraying a medium on the side face of the  
silicon block or the silicon stack, shifting closer or contacting a  
20   polishing member having abrasive grains on its surface and/or  
in the inside thereof to or with the side face to be polished, and  
moving the silicon block or the silicon stack relatively to the  
polishing member so that the side face of the silicon block or the  
silicon stack is mechanically and physically polished.

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4. A method according to claims 2 or 3, wherein the polishing is carried out while spraying the mixture of the abrasive grains and the medium or the medium solely.
- 5 5. A method according to any one of claims 1 to 4, wherein the flattened side face of the silicon block or the silicon stack has surface roughness  $R_y$  of 8  $\mu\text{m}$  or less.
6. A method according to claim 5, wherein the flattened  
10 side face of the silicon block or the silicon stack has surface roughness  $R_y$  of 6  $\mu\text{m}$  or less.
7. A method according to any one of claims 1 to 6, wherein  
15 a section of the silicon block or the silicon stack is constructed of four main lines, the lines forming an angle of about  $90^\circ$  with adjacent lines, respectively.